

REMARKS

Claims 1, 2, 4-6, and 8-16 are pending. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

A. Claims 1, 2, 10, and 11 were rejected under 35 U.S.C. § 103(a) over Bremer (U.S. Patent No. 4,464,767) in view of Samueli et al. (U.S. Patent No. 6,144,712). Applicant respectfully traverses this rejection.

Claim 1 recites, in part, a QAM transmitting apparatus having a multiplicity of transmission bands with variable transmission rates that includes band splitting means for distributing the TX data preprocessed by the TC sub-layer means to a predetermined number of band TX processing means based on predetermined and different data transmission rates. In response to Applicants' previous arguments, the Office Action, on pages 2 and 3, alleges that the combination of Bremer and Samueli renders claim 1 obvious. Applicants respectfully disagree.

As previously discussed, Bremer merely discloses a bit partitioning circuit 28 which divides the input data into three groups through control circuitry 30 which steers the bits sequentially to the proper transmitter 22, 24, 26. In fact, Bremer merely ties a number of existing identically low rate transmitters in parallel to achieve a higher rate transmitter (See, for example, column 1, lines 25-33 and column 2, lines 10-35).

Samueli discloses a variable rate modulator that includes a front end processor for receiving data at a variable frequency and processes the data such that the output sampling frequency is fixed (See, for example, column 1, lines 60-67 and column 2, lines 45-50). Accordingly, Samueli teaches that the variable rate data is actually processed in a front end processor 16 so that the data rate is fixed.

Neither Bremer or Samueli teaches or suggests a band splitting means for distributing the TX data preprocessed by the TC sub-layer means to a predetermined number of band TX processing means based on predetermined and different data transmission rates, as recited in claim 1. In fact, at best, the combination of Bremer and Samueli would result in the transmitter of Bremer with the processor 16 of Samueli upstream of the bit partitioning circuit 28 in which case, the bit partitioning circuit would not receive different data transmission rate signals. Further, even if a different transmission rate signal was received by a receiver created by any

combination of Bremer and Samueli, the data would not be split into a predetermined number of bands based on different data transmission rates since there is no suggestion in either reference to split data in such a manner.

Accordingly, no combination of Bremer and Samueli teach or suggest a QAM transmitting apparatus having a multiplicity of transmission bands with variable transmission rates that includes band splitting means for distributing the TX data preprocessed by the TC sub-layer means to a predetermined number of band TX processing means based on predetermined and different data transmission rates, as recited in claim 1.

Claim 10 is believed allowable for at least the reasons presented above with respect to claim 1 because claim 10 recites features that are similar to the features of claim 1 discussed above.

Claims 2 and 11 are believed allowable for at least the same reasons presented above with respect to claims 1 and 10 by virtue of their dependence upon claims 1 and 10. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

B. Claims 4, 5, 12, and 13 were rejected under 35 U.S.C. § 103(a) over Bremer in view of Samueli and further in view of Kaku et al. (U.S. Patent No. 5,987,064). Applicant respectfully traverses this rejection.

Claims 4, 5, 12, and 13 are believed allowable for at least the same reasons presented above with respect to claims 1 and 10 by virtue of their dependence upon claims 1 and 10 and because Kaku does not remedy at least the deficiencies of Bremer in view of Samueli discussed above. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

C. Claims 6 and 14 were rejected under 35 U.S.C. § 103(a) over Bremer in view of Samueli and further in view of Yagi (U.S. Patent No. 5,995,168). Applicant respectfully traverses this rejection.

Claims 6 and 14 are believed allowable for at least the reasons presented above with respect to claim 1 because claims 6 and 14 recite features that are similar to the features of claim 1 discussed above and because Yagi does not remedy the deficiencies of Bremer and Samueli discussed above.

D. Claims 8, 9, 15, and 16 were rejected under 35 U.S.C. § 103(a) over Bremer in view of Samueli and further in view of Yagi and Kaku. Applicant respectfully traverses this rejection.

Claims 8, 9, 15, and 16 are believed allowable for at least the same reasons presented above with respect to claims 6 and 14 by virtue of their dependence upon claims 6 and 14 and because Kaku does not remedy at least the deficiencies of Bremer in view of Samueli and Yagi discussed above. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Conclusion

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

MAYER BROWN ROWE & MAW LLP

By:


Yoon S. Ham
Registration No. 45,307
Direct No. (202) 263-3280

YSH/VVK

Intellectual Property Group
1909 K Street, N.W.
Washington, D.C. 20006-1101
(202) 263-3000 Telephone
(202) 263-3300 Facsimile

Date: January 23, 2006